Dart Aerospace Ltd.

Date: Monday, 3/13/2006 10:01:23 AM
User: Linda Lacelle

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services
Job Number : 26210A
Estimate Number : 10394
P.O. Number : N/A
This Issue : 3/13/2006 **S.O. No.** : N/A
Prsht Rev. : NC
First Issue : 3/13/2006 **Type** : MACHINED PARTS
Previous Run : 24537A
Written By : SEE COMMENT BELOW
Checked & Approved By : SEE ABOVE USER & DATE
Comment : Est:C 03.04.11 Reformat; Incorporated D2968-1/-5 KJ/RF

Drawing Name : STEM
Part Number : D29681
Drawing Number : D2968 ~~UNDER REVIEW~~ OK 06.03.15
Project Number : N/A
Drawing Revision : B1
Material : N/A
Due Date : 4/10/2006 **Qty:** ~~40~~ 42 **Um:** Each

Additional Product

Job Number:

Seq. #:	**Machine Or Operation:**	**Description :**
1.0	M4130NR0750	4130 steel rod .750"

Comment: Qty.: 0.4550 f(s)/Unit Total : 18.1986 f(s)
Material: AISI 4130 Ø 3/4 " Bar
(M4130N-R0.750) Batch: M19162
Identify AS D2968-1
MS 06/03/20 42

2.0	HARDINGE	HARDINGE CNC LATHE SMALL

Comment: HARDINGE CNC LATHE SMALL
1-Turn Blank as per Folio FA047 and Dwg D2968 MS 06/03/20
2-Deburr, no sharp edges
42

3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE

Comment: INSPECT PARTS AS THEY COME OFF MACHINE MS 06/03/20 42

4.0	HAAS1	HAAS CNC VERTICAL MACHINING #1

Comment: HAAS CNC VERTICAL MACHINING #1
1- Machine as per Folio FA047 and Dwg D2968
2- Deburr J.F 06/04/18 42

5.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE

Comment: INSPECT PARTS AS THEY COME OFF MACHINE J.F. 06/04/18 42

Dart Aerospace Ltd

W/O:		**WORK ORDER CHANGES**					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: ____________ **PAR #:** _______ **Fault Category:** ____________ **NCR:** Yes [✓ No] **DQA:** ______ **Date:** 06/04/19

QA: N/C Closed: _____ **Date:** _________

NCR:		**WORK ORDER NON-CONFORMANCE (NCR)**						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevD

Date: Monday, 3/13/2006 10:01:23 AM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services
Drawing Name: STEM

Job Number: 26210A
Part Number: D29681

Job Number:

Seq. #:	**Machine Or Operation:**	**Description :**
6.0	QC8	SECOND CHECK

Comment: SECOND CHECK

SA 06.04.18

7.0	PACKAGING 1	PACKAGING RESOURCE #1

Comment: PACKAGING RESOURCE #1
Identify and Stock
Location:_______

SA 06/04/19
4/2

8.0	DC	DOCUMENT CONTROL

Comment: DOCUMENT CONTROL
Inspection Level 21

42

06/04/19

Job Completion

u 06.04.19

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: ____________________ **PAR #:** _______ **Fault Category:** __________________ **NCR:** Yes No **DQA:** _____ **Date:** _________

QA: N/C Closed: _____ **Date:** _________

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
			Corrective Action Section B						
DATE	STEP	Description of NC Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Verification Section C	Approval Chief Eng	Approval QC Inspector

NOTE: Date & initial all entries

DART AEROSPACE LTD	**Work Order:** 26210A
Description: Stem	**Part Number:** D2968-1
Inspection Dwg: D2968 **Rev:** B1	**Page 1 of 1**

FIRST ARTICLE INSPECTION CHECKLIST

☒ **First Article** ☐ **Prototype**

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
5.040	+/-0.010	5.044	✓			
4.020	+0.000/-0.010	4.017	✓			
3.270	+/-0.010	3.270	✓			
0.470	+/-0.010	.470	✓			
0.250	+/-0.010	.248	✓			
0.550	+/-0.010	.557	✓			
Ø0.750	+/-0.010	.747	✓			
Ø0.625	+/-0.010	.622	✓			
Ø0.363	+/-0.010	Ø.363				
0.250	+0.010/-0.000	.252"				
0.625	+/-0.010	.627"				
0.150	+/-0.010	.144"				
0.250	+0.010/-0.000					
0.625	+/-0.010					
0.150	+/-0.010					
1/4-28 Major dia	0.243 - 0.249					
MOW	0.261 – 0.267	.266	✓			

HAAS

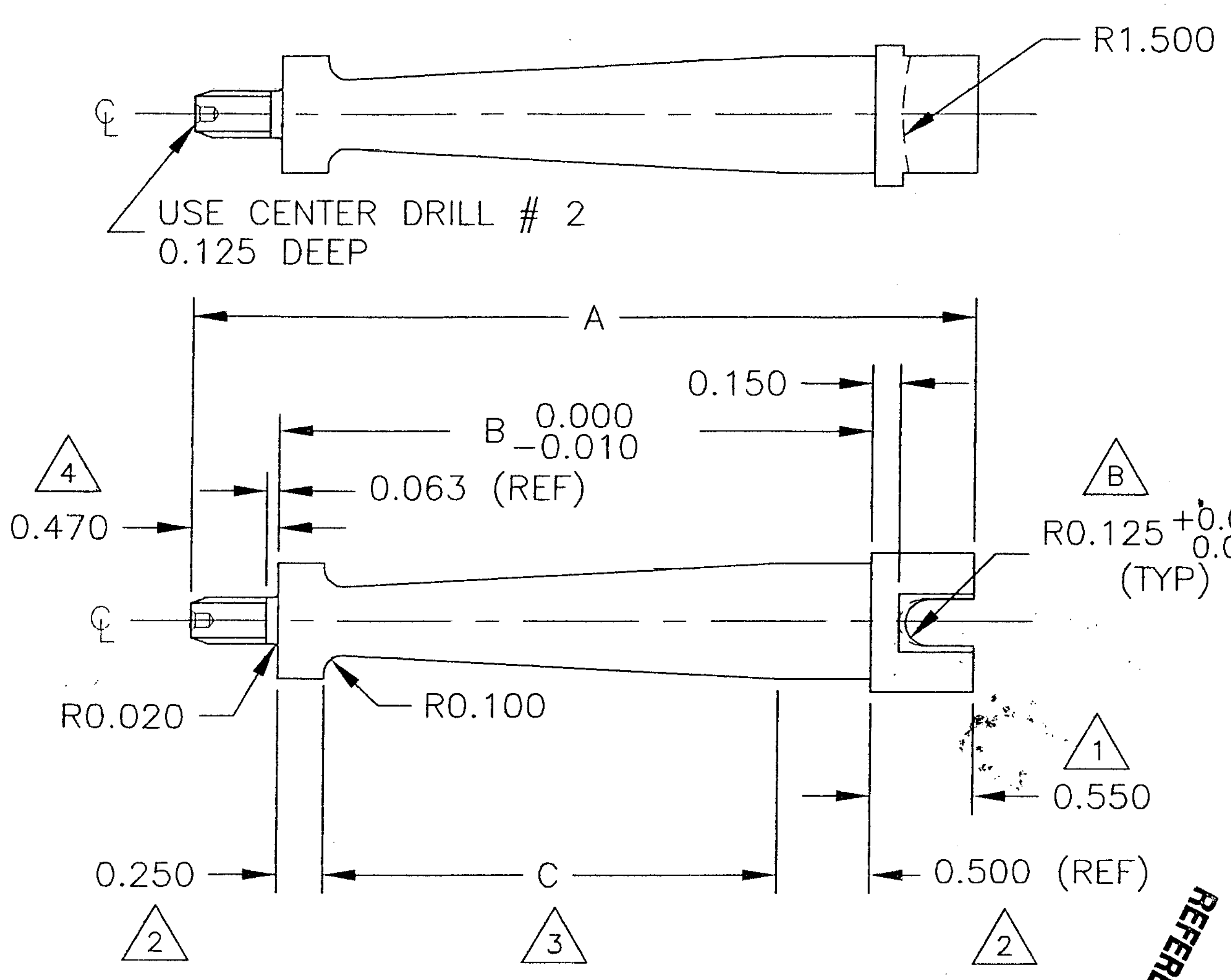
Measured by:	MS
Date:	06/03/20

Audited by:	SD
Date:	06.04.18

Prototype Approval:	N/A
Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.02.25	New Issue P/O D2968-041	KJ/RF	
B	05.05.26	Dimensions added	KJ/JLM	

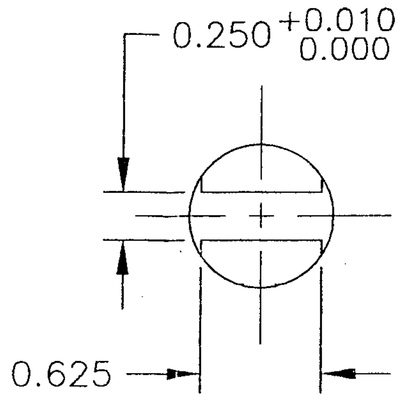
RELEASED 05.05.26



PART NUMBER	A	B	C
D2968−1	5.040	4.020	3.270
D2968−3	4.200	3.180	2.430

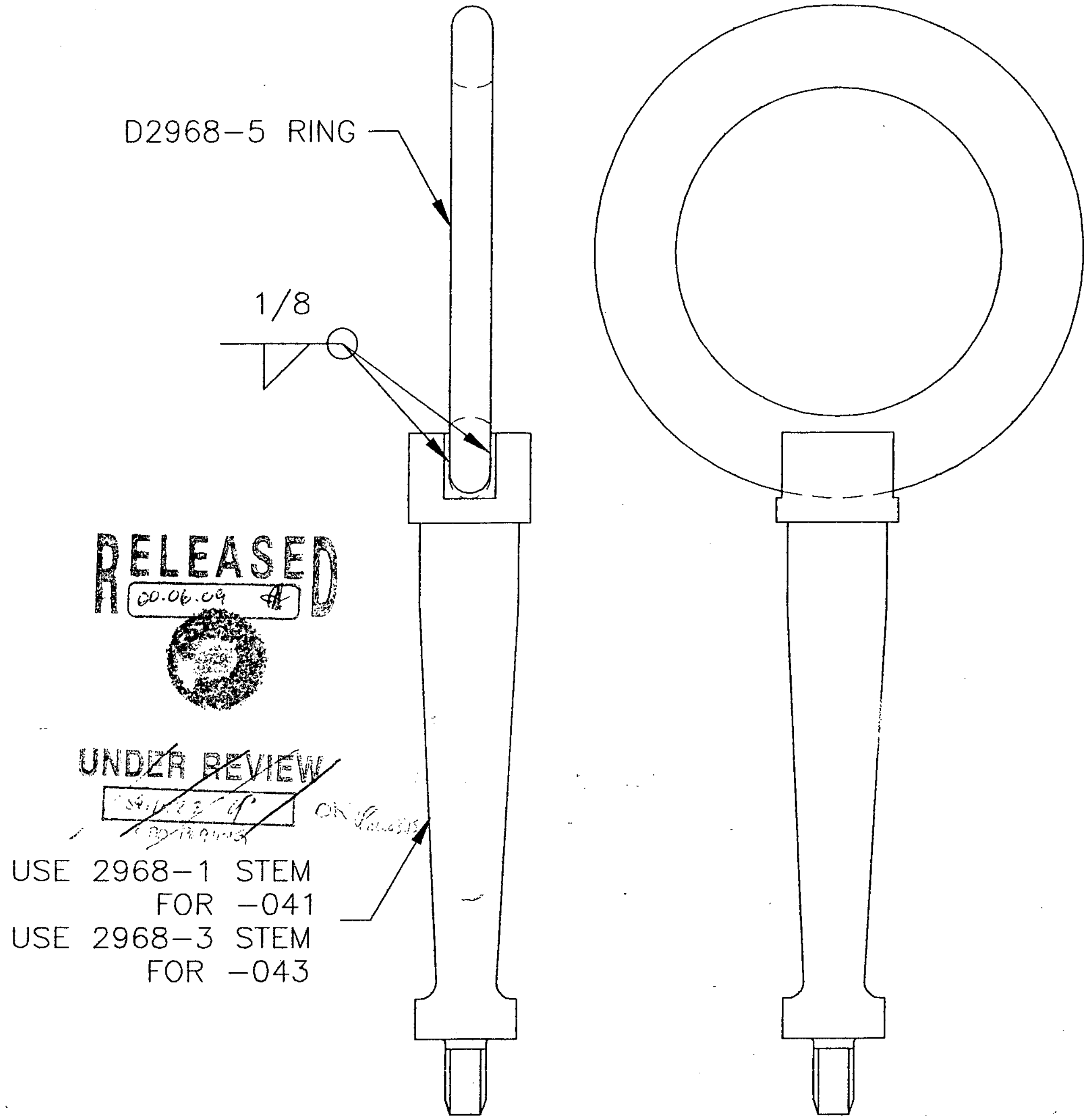
D2968−1/−3 STEM

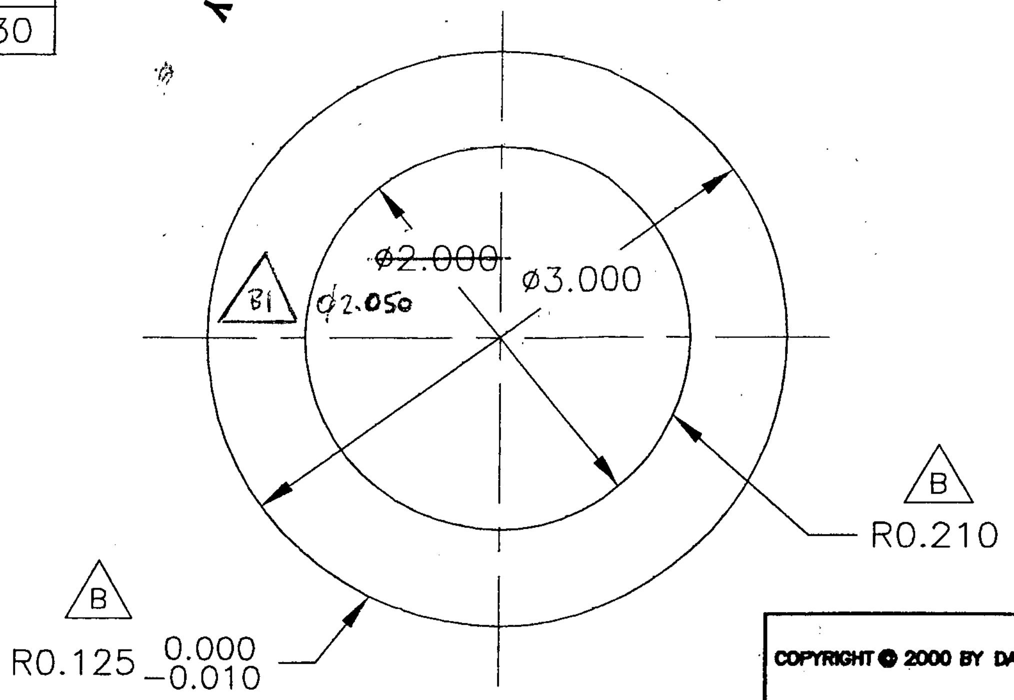
REFERENCE ONLY



RELEASED 00.06.09

~~UNDER REVIEW~~





D2968−5 RING

D2968−1 AND D2968−3 STEM:

MATERIAL: AISI 4130

1. ø0.750 O.D.
2. ø0.625 O.D.
3. MACHINE UNIFORM TAPER FROM ø0.363 O.D. TO ø0.625 O.D.
4. 1/4−28 UNF THREAD WITH 0.063 GRIP

MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS UNLESS OTHERWISE INDICATED

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

D2968−5 RING:

MATERIAL AISI 4130

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

D2968−041 AND D2968−043 TOW RING:

WELD PER QSI 004 ON ALL EDGES BETWEEN STEM AND RING

HEAT TREAT TO MIN ULTIMATE TENSILE STRENGTH OF 125 KSI

FINISH: CAD PLATE ENTIRE ASSEMBLY PER
QQ−P−416F CLASS I TYPE II
POWDER COAT WHITE (REF 4.3.5.2) PER DART
QSI 005 4.3 (EXCEPT THREADS)

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

B1 04.02.06 2.050 was 2.000

B	00.05.31	R0.125 AND R0.210 WERE 0.060 x 45°
A	00.03.07	NEW ISSUE

DESIGN	DRAWN BY RF	DART	DART AEROSPACE LTD. HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D2968	REV. B SHEET 1 OF 1
DATE 00.05.31		TITLE TOW RING	SCALE 1:1